

**Flood Control Project Maintenance  
Levee Inspections**  
**LMA District Cover Sheet**  
**Spring 2019 Levee Inspection Results**

**Knights Landing Ridge Drainage District**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)				

\*\* Non-receipt of Summer or Winter Inspection  
Reports may effect overall annual rating.

† SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments


**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Spring 2019 Levee Inspection Results**

**Knights Landing Ridge Drainage District**

Waterway			Bank	Unit Miles
Unit No. 01 Knights Landing Ridge Cut			Right	6.36
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	4/4/2019 - 4/4/2019			
DWR Inspector	Zach Jojola			
Accompanied By	Gary Marler RD0108			

**Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

*The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.*

**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start		Rating **	A	Issue No.	<b>3</b>
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2017_3				
Comment Code					
Inspector Comment					
District has levee O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	<b>8</b>
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2013_8				
Comment Code					
Inspector Comment					
District maintains a stockpile of flood fight response material.					

No Photos

LM Start		Rating **	A	Issue No.	<b>9</b>
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2013_9				
Comment Code					
Inspector Comment					
District has written response plan and regular flood fight training.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.25	Rating **	A/W	Issue No.	32	
LM End	0.25	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.722222 °	38.722222 °	
				-121.666357 °	-121.666357 °	
DWR ID	19360					
Comment Code						
Inspector Comment						
FS_ID:53529 DS_ID:19360 EP_NO: 9302 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 12/07/2018 Need updated photos to show proper pipe abandonment. Update Part VI, 1. Pipe Section to remove part c and e. If crossing was abandoned properly crossing will need to be removed from the LMA responsibility list. (O. Magana - DWR UCIP)05/16/2016 Pipe has been grouted in place under permit 18987, 2015. (T. Hatch - DWR UCIP)04/05/2013 Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet. (W. Wylie - DWR UCIP) FIELD_STRUCT_DESC: *ABANDONED* 36-inch corrugated metal drainage pipe through the levee, 27 feet below the crown. Slide gate on the waterside (WS) end. 12-foot by 6-foot concrete box on the landside (LS) end. (36-inch pipe [HLM 1.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9302, 1974 - Barbara Lowe Elliott; 36-inch pipe abandoned by removing ends and pumping pipe full of concrete under Permit No. 18987, 2016 - Knaggs Ranch, LLC, care of John Brennan). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 0+30)]. FS Date: 5/16/2016 3:59:00 PM						

LM Start	<b>0.25</b>	Rating **	A/W	Issue No.	<b>32 (cont)</b>
LM End	<b>0.25</b>	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_53529\_21582.jpg



Concrete distribution box on LS toe.

Photo 2 of 3 : UCIP\_SP\_2019\_53529\_21581.jpg



Slide gate on metal stand on WS toe. Pipe opening not visible.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.25	Rating **	A/W	Issue No.	32 (cont)	
LM End	0.25	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			38.722222 °		38.722222 °
				-121.666357 °		-121.666357 °
DWR ID	19360					
Comment Code						
Inspector Comment						
FS_ID:53529 DS_ID:19360 EP_NO: 9302 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 12/07/2018 Need updated photos to show proper pipe abandonment. Update Part VI, 1. Pipe Section to remove part c and e. If crossing was abandoned properly crossing will need to be removed from the LMA responsibility list. (O. Magana - DWR UCIP)05/16/2016 Pipe has been grouted in place under permit 18987, 2015. (T. Hatch - DWR UCIP)04/05/2013 Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet. (W. Wylie - DWR UCIP) FIELD_STRUCT_DESC: *ABANDONED* 36-inch corrugated metal drainage pipe through the levee, 27 feet below the crown. Slide gate on the waterside (WS) end. 12-foot by 6-foot concrete box on the landside (LS) end. (36-inch pipe [HLM 1.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9302, 1974 - Barbara Lowe Elliott; 36-inch pipe abandoned by removing ends and pumping pipe full of concrete under Permit No. 18987, 2016 - Knaggs Ranch, LLC, care of John Brennan). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 0+30)]. FS Date: 5/16/2016 3:59:00 PM						

Photo 3 of 3 : UCIP\_SP\_2019\_53529\_21580.jpg



Pipe failure at connection to concrete box on LS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.87	Rating **	M	Issue No.	33	
LM End	0.87	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.727869 °		38.727869 °
				-121.674875 °		-121.674875 °
DWR ID	19361					
Comment Code						
Inspector Comment						
FS_ID:11064						
DS_ID:19361						
EP_NO: 9302						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Pipe exposed on WS slope in trench may need to be backfilled to prevent erosion under pipe.						
FIELD_STRUCT_DESC: 20-inch steel irrigation pipe through the levee, 8.8 feet below the crown. Pump on a steel pile structure at the waterside (WS) toe. Siphon breaker in a 12-inch steel riser on the landside (LS) slope. Possible butterfly valve at the LS toe. (Permit No. 9302, 1974 - Barbara Lowe Elliott). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 32+94)].						
FS Date: 4/5/2013						

LM Start	<b>0.87</b>	Rating **	M	Issue No.	<b>33 (cont)</b>
LM End	<b>0.87</b>	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_11064\_18426.jpg



Pump on pile at WS toe with pipe in open trench on LS slope.

Photo 2 of 3 : UCIP\_SP\_2019\_11064\_18425.jpg



Siphon breaker in 12-inch steel riser on LS slope.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.87	Rating **	M	Issue No.	33 (cont)	
LM End	0.87	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.727869 °	38.727869 °	
				-121.674875 °	-121.674875 °	
DWR ID	19361					
Comment Code						
Inspector Comment						
FS_ID:11064 DS_ID:19361 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe exposed on WS slope in trench may need to be backfilled to prevent erosion under pipe. FIELD_STRUCT_DESC: 20-inch steel irrigation pipe through the levee, 8.8 feet below the crown. Pump on a steel pile structure at the waterside (WS) toe. Siphon breaker in a 12-inch steel riser on the landside (LS) slope. Possible butterfly valve at the LS toe. (Permit No. 9302, 1974 - Barbara Lowe Elliott). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 32+94)]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP\_SP\_2019\_11064\_18424.jpg



Possible butterfly valve off LS toe.

LM Start	1.13	Rating **	M	Issue No.	26
LM End	1.29	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.730134 °	38.731873 °
				-121.678820 °	-121.680739 °
DWR ID	DWR_NA0008_01_f_2017_26				
Comment Code					
FE : Fence					
Inspector Comment					
A barbed wire fence is located on the landside slope.					

Photo 1 of 1 : SP\_2019\_NA0008\_256\_26\_20190304\_00009.jpg



View of fence on the landside slope. Fall 2017.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.15	Rating **	M	Issue No.	34
LM End	1.15	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.730275 °	38.730275 °
				-121.678975 °	-121.678975 °
DWR ID	19362				
Comment Code					
Inspector Comment					
FS_ID:11065 DS_ID:19362 EP_NO: 9305 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud. FIELD_STRUCT_DESC: 10-inch steel irrigation pipe through the levee, 5.8 feet below the crown. Pump at the waterside (WS) toe. 36-inch concrete standpipe at the landside (LS) toe. (Permit No. 9305, 1974 - Albert L. Bacchini). 5-inch steel pipe sleeved through the 10-inch pipe. Annular space grouted. (Permit No. 6076, 1968 - Albert L. Bacchini). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 47+00) (11-inch pipe listed)]. FS Date: 4/5/2013					

LM Start	<b>1.15</b>	Rating **	M	Issue No.	<b>34 (cont)</b>
LM End	<b>1.15</b>	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_11065\_18429.jpg



Pump on WS shoulder overgrown and may be abandoned.

Photo 2 of 3 : UCIP\_SP\_2019\_11065\_18428.jpg



Erosion at pipes exit from levee on WS shoulder.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.15	Rating **	M	Issue No.	34 (cont)	
LM End	1.15	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.730275 °	38.730275 °	
				-121.678975 °	-121.678975 °	
DWR ID	19362					
Comment Code						
Inspector Comment						
FS_ID:11065 DS_ID:19362 EP_NO: 9305 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud. FIELD_STRUCT_DESC: 10-inch steel irrigation pipe through the levee, 5.8 feet below the crown. Pump at the waterside (WS) toe. 36-inch concrete standpipe at the landside (LS) toe. (Permit No. 9305, 1974 - Albert L. Bacchini). 5-inch steel pipe sleeved through the 10-inch pipe. Annular space grouted. (Permit No. 6076, 1968 - Albert L. Bacchini). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 47+00) (11-inch pipe listed)]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP\_SP\_2019\_11065\_18427.jpg



36-inch Concrete standpipe at LS toe

LM Start	1.59	Rating **	M	Issue No.	35	
LM End	1.59	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.735399 °	38.735399 °	
				-121.684058 °	-121.684058 °	
DWR ID	19363					
Comment Code						
Inspector Comment						
FS_ID:13204						
DS_ID:19363						
EP_NO: 9302						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe.						
FIELD_STRUCT_DESC: 24-inch steel irrigation pipe through the levee, 5.9 feet below the crown. 16-inch steel pipe sleeved through this pipe. No visible control valves. Pump on a pile structure in the stream.						
Siphon breaker on the landside (LS) slope. Pipe discharges into a concrete irrigation ditch off the LS toe. (Permit No. 939, 1943 - W. K. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 71+25)].						
FS Date: 4/5/2013						

Photo 1 of 3 : UCIP\_SP\_2019\_13204\_21588.jpg



16-inch pipe sleeved through 24-inch pipe on WS slope.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.59	Rating **	M	Issue No.	35 (cont)	
LM End	1.59	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.735399 °		38.735399 °
				-121.684058 °		-121.684058 °
DWR ID	19363					
Comment Code						
Inspector Comment						
FS_ID:13204 DS_ID:19363 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe. FIELD_STRUCT_DESC: 24-inch steel irrigation pipe through the levee, 5.9 feet below the crown. 16-inch steel pipe sleeved through this pipe. No visible control valves. Pump on a pile structure in the stream. Siphon breaker on the landside (LS) slope. Pipe discharges into a concrete irrigation ditch off the LS toe. (Permit No. 939, 1943 - W. K. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 71+25)]. FS Date: 4/5/2013						

LM Start	<b>1.59</b>	Rating **	M	Issue No.	<b>35 (cont)</b>
LM End	<b>1.59</b>	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_13204\_21590.jpg



Siphon breaker on LS slope.

Photo 3 of 3 : UCIP\_SP\_2019\_13204\_21589.jpg



Pipe and pier on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.23	Rating **	C	Issue No.	23
LM End	2.23	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.742899 °	38.742899 °
				-121.690897 °	-121.690897 °
DWR ID	DWR_NA0008_01_f _ 2018_23				
Comment Code					
CR1 : Monitor and have inspected by geotechnical engineer.					
Inspector Comment					
There is a 50' crack on the crown at previous sloughing site. There appears to be no bulge or sloughing on the landside slope. Slight settlement on the crown. Recommend monitoring.					

No Photos

LM Start	2.58	Rating **	M	Issue No.	36
LM End	2.58	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.747110 °	38.747110 °
				-121.694415 °	-121.694415 °
DWR ID	19364				
Comment Code					
Inspector Comment					
FS_ID:11067 DS_ID:19364 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Siphon breaker on LS burried or broken off and missing. FIELD_STRUCT_DESC: 1 of 2: 14-inch steel drainage pipe through the levee, 5.4 feet below the crown. Pump house on a pile structure at the landside (LS) toe. Siphon breaker on the LS slope. Service pole and anchor at the LS toe. (14-inch pipe [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe; a 12-foot section of an existing 14-inch pipe on LS replaced and name change under Permit No. 9307-1, 2016 - Ann Grube). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+25)]. FS Date: 4/5/2013					

Photo 1 of 1 : UCIP\_SP\_2019\_11067\_18431.jpg



Pump and pipe on LS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	37
LM End	2.58	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.747204 °	38.747204 °
				-121.694440 °	-121.694440 °
DWR ID	19391				

**Comment Code**

**Inspector Comment**

FS\_ID:13205  
DS\_ID:19391  
EP\_NO: 9307  
Repair Type: Non-Urgent  
Crossing Status: Found  
UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate.  
FIELD\_STRUCT\_DESC: 2 of 2: 48-inch by 48-inch reinforced concrete box drainage culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside (WS) end. Concrete headwalls on both ends. Service pole and anchor at the landside (LS) toe. Concrete headwalls on both ends. (four foot by four foot culvert [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+55.5)].  
FS Date: 4/5/2013

LM Start	<b>2.58</b>	Rating **	M	Issue No.	<b>37 (cont)</b>
LM End	<b>2.58</b>	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_13205\_21602.jpg



Slide gate and concrete headwall on WS toe.

Photo 2 of 3 : UCIP\_SP\_2019\_13205\_21601.jpg



Concrete inlet on LS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	37 (cont)	
LM End	2.58	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.747204 °	38.747204 °	
				-121.694440 °	-121.694440 °	
DWR ID	19391					
Comment Code						
Inspector Comment						
FS_ID:13205 DS_ID:19391 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate. FIELD_STRUCT_DESC: 2 of 2: 48-inch by 48-inch reinforced concrete box drainage culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside (WS) end. Concrete headwalls on both ends. Service pole and anchor at the landside (LS) toe. Concrete headwalls on both ends. (four foot by four foot culvert [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+55.5)]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP\_SP\_2019\_13205\_21605.jpg



Inlet located next to concrete headwall on LS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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# Knights Landing Ridge Drainage District



**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.67	Rating **	A/W	Issue No.	39 (cont)	
LM End	2.67	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP LMA Responsibility			38.748404 °		38.748404 °
				-121.694818 °		-121.694818 °
DWR ID	19392					
Comment Code						
Inspector Comment						
FS_ID:16106 DS_ID:19392 EP_NO: 9301 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 7.3 feet below the crown. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. Siphon breaker in riser on the waterside (WS) slope. (one 24-inch and one 18-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)]. FS Date: 4/5/2013						

LM Start	<b>2.67</b>	Rating **	A/W	Issue No.	<b>39 (cont)</b>
LM End	<b>2.67</b>	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_16106\_27212.jpg



Siphon breaker on WS slope

Photo 3 of 3 : UCIP\_SP\_2019\_16106\_27214.jpg



Pipe on WS slope.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.68	Rating **	M	Issue No.	40
LM End	2.68	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748524 °	38.748524 °
				-121.694788 °	-121.694788 °
DWR ID	19383				
Comment Code					
Inspector Comment					
FS_ID:41892 DS_ID:19383 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Not Found UCIP Comments: Need to contact owner to determine status of crossing and install markers if appropriate. FIELD_STRUCT_DESC: 4-inch coated steel natural gas collection pipe through the levee, 2.8 feet below the crown. Pipe attached to the downstream side of the bridge. (Permit No. 13164, 1981 - Shell Oil Company). Design drawings available in permit. FS Date: 4/5/2013					

No Photos

LM Start	2.70	Rating **	M	Issue No.	18
LM End	2.70	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.748837 °	38.748837 °
				-121.694823 °	-121.694823 °
DWR ID	DWR_NA0008_01_f_ 2015_18				
Comment Code					
DE : Debris					
Inspector Comment					
A portion of the pipe seems to have been replaced and the abandoned pipe is left at the toe of the landward side of the levee.					

Photo 1 of 2 : SP\_2019\_NA0008\_256\_18\_20190304\_00003.jpg



The dark portion on the left pipe seems to have been replaced with a new pipe. Fall 2015.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.70	Rating **	M	Issue No.	18 (cont)	
LM End	2.70	Issue Type +	En	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start	End	
Item	Encroachments			38.748837 °	38.748837 °	
				-121.694823 °	-121.694823 °	
DWR ID	DWR_NA0008_01_f_2015_18					
Comment Code						
DE : Debris						
Inspector Comment						
A portion of the pipe seems to have been replaced and the abandoned pipe is left at the toe of the landward side of the levee.						

Photo 2 of 2 : SP\_2019\_NA0008\_256\_18\_20190304\_00004.jpg



View of the abandoned pipe at the toe of levee on the landward side.  
Fall 2015.

LM Start	3.36	Rating **	M	Issue No.	19
LM End	3.44	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.758432 °	38.759332 °
				-121.695158 °	-121.696063 °
DWR ID	DWR_NA0008_01_f_2018_19				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.5 R					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - Toe scour and bank slumping.					

No Photos

LM Start	3.50	Rating **	M	Issue No.	20
LM End	3.50	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.759910 °	38.759910 °
				-121.696920 °	-121.696920 °
DWR ID	DWR_NA0008_01_f_2015_20				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					

Photo 1 of 2 : SP\_2019\_NA0008\_256\_20\_20190304\_00005.jpg



View of erosion on the waterside slope. Spring 2018.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.50	Rating **	M	Issue No.	20 (cont)	
LM End	3.50	Issue Type +	Ma	Location *	WS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Erosion / Bank Caving			38.759910 °		38.759910 °
				-121.696920 °		-121.696920 °
DWR ID	DWR_NA0008_01_f_2015_20					
Comment Code						
E2 : Schedule repair of erosion site prior to the next inspection.						
Inspector Comment						

Photo 2 of 2 : SP\_2019\_NA0008\_256\_20\_20190304\_00006.jpg



View of the erosion on the waterward side of the levee looking upstream. Fall 2015.

LM Start	3.78	Rating **	M	Issue No.	30
LM End	3.78	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.762886 °	38.762886 °
				-121.700406 °	-121.700406 °
DWR ID	DWR_NA0008_01_s_2017_30				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
There is a hole from a fallen tree at the waterside toe.					

Photo 1 of 1 : SP\_2019\_NA0008\_256\_30\_20190404\_00040.jpg



View of hole at the waterside toe. Spring 2019.

LM Start	3.86	Rating **	M	Issue No.	31
LM End	3.86	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.763751 °	38.763751 °
				-121.701398 °	-121.701398 °
DWR ID	DWR_NA0008_01_s_2018_31				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
There is erosion at the toe of the levee. LMA is monitoring erosion with stakes.					

Photo 1 of 1 : SP\_2019\_NA0008\_256\_31\_20190304\_00011.jpg



View of the erosion at the toe of the levee on the waterward side. Spring 2016.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.88	Rating **	M	Issue No.	21
LM End	3.95	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.764037 °	38.764905 °
				-121.701434 °	-121.702074 °
DWR ID	DWR_NA0008_01_f_2018_21				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.9 R					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - Toe erosion and erosion pockets from tree popouts. More tree popouts are expected due to the eroding toe.					

No Photos

LM Start	4.38	Rating **	M	Issue No.	22
LM End	4.88	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.771003 °	38.777404 °
				-121.703413 °	-121.707412 °
DWR ID	DWR_NA0008_01_f_2015_22				
Comment Code					
DT : Ditch					
Inspector Comment					
A ditch is at the levee toe on the landward side.					

Photo 1 of 1 : SP\_2019\_NA0008\_256\_22\_20190304\_00007.jpg



View of the ditch on the landward side of the levee looking upstream.  
Fall 2015.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	4.89	Rating **	M	Issue No.	41
LM End	4.89	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.777566 °	38.777566 °
				-121.707591 °	-121.707591 °
DWR ID	19367				
Comment Code					
Inspector Comment					
FS_ID:11264					
DS_ID:19367					
EP_NO: 4443					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Pipe does not have adequate cover at crown.					
FIELD_STRUCT_DESC: 16-inch steel drainage pipe through the levee,					
0.5 feet below the crown. Pad constructed over pipe for vehicular					
crossing. Pump on metal structure on the landside (LS). Flap gate on					
the waterside (WS) end. Siphon breaker on the pipe on the WS. Slide					
gate on the LS toe. (Permit No. 4443, 1963 - Reclamation District No.					
730). Design drawings available in permit. [Additional Reference(s):					
DWR Levee Log, 1990].					
FS Date: 4/5/2013					

Photo 1 of 3 : UCIP\_SP\_2019\_11264\_18622.jpg



Pump and pipe on LS toe.

LM Start	<b>4.89</b>	Rating **	M	Issue No.	<b>41 (cont)</b>
LM End	<b>4.89</b>	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_11264\_18621.jpg



Siphon and air vent on WS shoulder.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	4.89	Rating **	M	Issue No.	41 (cont)	
LM End	4.89	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.777566 °		38.777566 °
				-121.707591 °		-121.707591 °
DWR ID	19367					
Comment Code						
Inspector Comment						
FS_ID:11264 DS_ID:19367 EP_NO: 4443 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe does not have adequate cover at crown. FIELD_STRUCT_DESC: 16-inch steel drainage pipe through the levee, 0.5 feet below the crown. Pad constructed over pipe for vehicular crossing. Pump on metal structure on the landside (LS). Flap gate on the waterside (WS) end. Siphon breaker on the pipe on the WS. Slide gate on the LS toe. (Permit No. 4443, 1963 - Reclamation District No. 730). Design drawings available in permit. [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013						

Photo 3 of 3 : UCIP\_SP\_2019\_11264\_18620.jpg



Pump on Steel pile structure with slide gate at LS toe.

LM Start	6.00	Rating **	M	Issue No.	42
LM End	6.00	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.788921 °	38.788921 °
				-121.721985 °	-121.721985 °
DWR ID	19397				
Comment Code					
Inspector Comment					
FS_ID:41068 DS_ID:19397 EP_NO: 5276 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe appears abandoned at this time. FIELD_STRUCT_DESC: 2 of 2: 20-inch steel irrigation pipe through the levee, 4.9 feet below the crown. Vertical pump unit on pile structure in stream. Siphon breaker on the landside (LS) shoulder in a 16-inch steel riser. Flap gate on the LS end. Pipe discharges into an irrigation ditch on the LS. Steel plate welded over end of pipe at pump structure. (Replaced an existing 18-inch pipe at this location under Permit No. 5276, 1966 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013					

Photo 1 of 3 : UCIP\_SP\_2019\_41068\_18643.jpg



Pump on steel structure at WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	6.00	Rating **	M	Issue No.	42 (cont)	
LM End	6.00	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start		End
Item	DWR UCIP Field Study			38.788921 °		38.788921 °
				-121.721985 °		-121.721985 °
DWR ID	19397					
Comment Code						
Inspector Comment						
FS_ID:41068 DS_ID:19397 EP_NO: 5276 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe appears abandoned at this time. FIELD_STRUCT_DESC: 2 of 2: 20-inch steel irrigation pipe through the levee, 4.9 feet below the crown. Vertical pump unit on pile structure in stream. Siphon breaker on the landside (LS) shoulder in a 16-inch steel riser. Flap gate on the LS end. Pipe discharges into an irrigation ditch on the LS. Steel plate welded over end of pipe at pump structure. (Replaced an existing 18-inch pipe at this location under Permit No. 5276, 1966 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990]. FS Date: 4/5/2013						

LM Start	<b>6.00</b>	Rating **	M	Issue No.	<b>42 (cont)</b>
LM End	<b>6.00</b>	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_41068\_18642.jpg



Steel plate welded over pipe end at pump platform.

Photo 3 of 3 : UCIP\_SP\_2019\_41068\_18641.jpg



Siphon breaker buried inside 16-inch steel riser on LS shoulder.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	04/04/2019 04/04/2019	Zach Jojola

LM Start	6.06	Rating **	M	Issue No.	7
LM End	6.34	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.789529 °	38.792433 °
				-121.722814 °	-121.726463 °
DWR ID	DWR_NA0008_01_f_2018_7				
Comment Code					
EQ : Equipment					
Inspector Comment					
Equipment and fence are on the landside slope of the levee.					

Photo 1 of 2 : SP\_2019\_NA0008\_256\_7\_20190304\_00001.jpg



View of the equipment on the landward side of the levee looking upstream. Fall 2015.

LM Start	<b>6.06</b>	Rating **	M	Issue No.	<b>7 (cont)</b>
LM End	<b>6.34</b>	Issue Type +	En	Location *	LS

Photo 2 of 2 : SP\_2019\_NA0008\_256\_7\_20190304\_00002.jpg



A view of the equipment on the levee slope. Spring 2014

LM Start	6.32	Rating **	A/W	Issue No.	16
LM End	6.32	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			38.792213 °	38.792213 °
				-121.726263 °	-121.726263 °
DWR ID	DWR_NA0008_01_s_2019_16				
Comment Code					
A1 : Exterminate rodents and backfill and compact or grout burrows.					
Inspector Comment					
A single rodent hole is located on the landside slope. Recommend monitoring for activity.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Spring 2019 Levee Inspection Results**

**Knights Landing Ridge Drainage District**

Waterway			Bank	Unit Miles
Unit No. 02 Knights Landing Ridge Cut			Left	6.03
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)				
Date of Inspection	4/4/2019 - 4/4/2019			
DWR Inspector	Zach Jojola			
Accompanied By	Gary Marler RD0108			

**Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

*The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.*

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.66	Rating **	A/W	Issue No.	19
LM End	0.66	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.729848 °	38.729848 °
				-121.674897 °	-121.674897 °
DWR ID	DWR_NA0008_02_s _ 2019_19				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
There is slow bank caving on the overbuilt waterside slope. Recommend monitoring.					

No Photos

LM Start	0.69	Rating **	A/W	Issue No.	18
LM End	0.69	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.730130 °	38.730130 °
				-121.675391 °	-121.675391 °
DWR ID	DWR_NA0008_02_s _ 2019_18				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
There is slow bank caving on the overbuilt waterside slope. Recommend monitoring.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.99	Rating **	M	Issue No.	23
LM End	0.99	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.733120 °	38.733120 °
				-121.679383 °	-121.679383 °
DWR ID	19370				
Comment Code					
Inspector Comment					
FS_ID:52536 DS_ID:19370 EP_NO: 9320 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 09/27/2017 Received updated information from DWR levee inspector, Zachary Jojola, confirming that this crossing is still abandoned. Recommend pipe be abandoned properly according to Title 23 requirements. Updated photos have been added to this report. (DWR UCIP - O. Magana)04/09/2013 Appears abandoned as pump is missing from platform. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 16-inch steel irrigation pipe through the levee, 2.8 feet below the crown. Pipe discharges into a 36-inch concrete standpipe at the levee toe. Pump on steel pile structure in stream with metal walkway. Two service poles on the waterside (WS) slope. (Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 52+00) (15-inch pipe listed)]. FS Date: 11/29/2017 12:46:36 PM					

Photo 1 of 3 : UCIP\_SP\_2019\_52536\_18708.jpg



Pipe at 36-inch Concrete standpipe on LS toe.

LM Start	<b>0.99</b>	Rating **	M	Issue No.	<b>23 (cont)</b>
LM End	<b>0.99</b>	Issue Type +	En	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_52536\_18707.jpg



Pump platform and walkway on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	0.99	Rating **	M	Issue No.	23 (cont)	
LM End	0.99	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.733120 °	38.733120 °	
				-121.679383 °	-121.679383 °	
DWR ID	19370					
Comment Code						
Inspector Comment						
FS_ID:52536 DS_ID:19370 EP_NO: 9320 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 09/27/2017 Received updated information from DWR levee inspector, Zachary Jojola, confirming that this crossing is still abandoned. Recommend pipe be abandoned properly according to Title 23 requirements. Updated photos have been added to this report. (DWR UCIP - O. Magana)04/09/2013 Appears abandoned as pump is missing from platform. (DWR UCIP - W. Wylie) FIELD_STRUCT_DESC: 16-inch steel irrigation pipe through the levee, 2.8 feet below the crown. Pipe discharges into a 36-inch concrete standpipe at the levee toe. Pump on steel pile structure in stream with metal walkway. Two service poles on the waterside (WS) slope. (Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 52+00) (15-inch pipe listed)]. FS Date: 11/29/2017 12:46:36 PM						

Photo 3 of 3 : UCIP\_SP\_2019\_52536\_77500.jpg



WS view: pipe and electrical panel visible.

LM Start	1.34	Rating **	M	Issue No.	22
LM End	1.54	Issue Type +	En	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.737214 °	38.739591 °
				-121.683159 °	-121.685327 °
DWR ID	DWR_NA0008_02_f_2016_22				
Comment Code					
DT : Ditch					
Inspector Comment					
A ditch is located within 10 feef from levee toe on LS.					

Photo 1 of 1 : SP\_2019\_NA0008\_257\_22\_20190304\_00007.jpg



View of a ditch near landside toe. Fall 2016.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.89	Rating **	A/W	Issue No.	24
LM End	1.89	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743768 °	38.743768 °
				-121.689185 °	-121.689185 °
DWR ID	19371				
Comment Code					
Inspector Comment					
FS_ID:52538 DS_ID:19371 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 09/27/2017 see dsid 25471 for details on new pipe installed. (DWR UCIP - O. Magana)09/01/2016 Pipe has been removed and replaced during the Knights Landing 2015 Levee Repair Project. (T. Hatch/UCIP) 04/08/2013 Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. (W. Wylie/UCIP) FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 12-inch steel drainage pipe through the levee, 4 feet below the crown. Flap gate on the waterside (WS). Pipe is resting on a concrete headwall associated with another pipe. Siphon breaker in a 2-inch corrugated metal pipe (CMP) riser on the landside (LS) shoulder. Vertical pump unit on a concrete foundation in the irrigation ditch at the LS toe. (12-inch pipe [HLM 1.90] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 9/16/2016 1:33:00 PM					

LM Start	<b>1.89</b>	Rating **	A/W	Issue No.	<b>24 (cont)</b>
LM End	<b>1.89</b>	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_52538\_18706.jpg



12-inch pipe at concrete headwall on WS toe.

Photo 2 of 3 : UCIP\_SP\_2019\_52538\_18705.jpg



Pipe rusted through at flap gate on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.89	Rating **	A/W	Issue No.	24 (cont)	
LM End	1.89	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.743768 °	38.743768 °	
				-121.689185 °	-121.689185 °	
DWR ID	19371					
Comment Code						
Inspector Comment						
FS_ID:52538 DS_ID:19371 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 09/27/2017 see dsid 25471 for details on new pipe installed. (DWR UCIP - O. Magana)09/01/2016 Pipe has been removed and replaced during the Knights Landing 2015 Levee Repair Project. (T. Hatch/UCIP) 04/08/2013 Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. (W. Wylie/UCIP) FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 12-inch steel drainage pipe through the levee, 4 feet below the crown. Flap gate on the waterside (WS). Pipe is resting on a concrete headwall associated with another pipe. Siphon breaker in a 2-inch corrugated metal pipe (CMP) riser on the landside (LS) shoulder. Vertical pump unit on a concrete foundation in the irrigation ditch at the LS toe. (12-inch pipe [HLM 1.90] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 9/16/2016 1:33:00 PM						

Photo 3 of 3 : UCIP\_SP\_2019\_52538\_18704.jpg



Pumphouse on concrete platform on LS toe with JP.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.90	Rating **	A/W	Issue No.	25
LM End	1.90	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743775 °	38.743775 °
				-121.689190 °	-121.689190 °
DWR ID	19399				
Comment Code					
Inspector Comment					
FS_ID:11305 DS_ID:19399 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 21 feet below the crown. Slide gate on the waterside (WS) end. Open on the landside (LS) end. LS toe cobble revetted. Service pole on the LS slope. (24-inch pipe [HLM 1.9] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 4/9/2013					

Photo 1 of 3 : UCIP\_SP\_2019\_11305\_18703.jpg



Pipe inlet located beneath pumphouse on LS toe.

LM Start	<b>1.90</b>	Rating **	A/W	Issue No.	<b>25 (cont)</b>
LM End	<b>1.90</b>	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_11305\_18702.jpg



Slide gate at headwall on WS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	1.90	Rating **	A/W	Issue No.	25 (cont)
LM End	1.90	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743775 °	38.743775 °
				-121.689190 °	-121.689190 °
DWR ID	19399				
Comment Code					
Inspector Comment					
FS_ID:11305 DS_ID:19399 EP_NO: 9320 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 21 feet below the crown. Slide gate on the waterside (WS) end. Open on the landside (LS) end. LS toe cobble revetted. Service pole on the LS slope. (24-inch pipe [HLM 1.9] authorized under Automatic Board Order (ABO) issued as Permit No. 9320, 1974 - Ralph W. Pollock). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 103+21.8)]. FS Date: 4/9/2013					

Photo 3 of 3 : UCIP\_SP\_2019\_11305\_18701.jpg



Slide gate at headwall on WS toe.

LM Start	2.26	Rating **	M	Issue No.	26
LM End	2.26	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.748282 °	38.748282 °
				-121.692652 °	-121.692652 °
DWR ID	19388				
Comment Code					
Inspector Comment					
FS_ID:11304 DS_ID:19388 EP_NO: 15517 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Pipe alignment should be marked at levee crossing. FIELD_STRUCT_DESC: 8-inch steel natural gas pipeline through the levee, 50 feet below the crown. (Permit No. 15517, 1991 - Chevron U.S.A., Inc.). Design drawings available in permit. FS Date: 4/9/2013					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.28	Rating **	M	Issue No.	27	
LM End	2.28	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.748505 °	38.748505 °	
				-121.692697 °	-121.692697 °	
DWR ID	19386					
Comment Code						
Inspector Comment						
FS_ID:53017 DS_ID:19386 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 09/16/2018 Crossing marker on levee Unit 02 is missing. Having a marker on County Road 16 shoulder is not enough to find exact crossing location on levee. Crossing has been downgraded to "Non-Urgent" due to reclassification of gas lines. (O.Yakimov - DWR)09/01/2016 - Markers present on the edges of Road 16. Alignment indicated by markers shows parallel alignment to the levee. Permit indicates pipe crosses levee and therefore should have markers indicating where it crosses the levee. (T. Hatch/UCIP)04/08/2013 - Need to have pipe located and marked properly if still in use. (W. Wylie/UCIP) FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee, 3.2 feet below the crown. Permit indicates that the pipe was installed on the northern shoulder of Road 16 and crosses the Knights Landing Ridge Cut on the northern side of the Road 16 bridge. (Permit No. 13164, 1981 - Shell Oil Company). FS Date: 10/16/2018 3:42:38 PM						

LM Start	<b>2.28</b>	Rating **	M	Issue No.	<b>27 (cont)</b>
LM End	<b>2.28</b>	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_53017\_18700.jpg



Sign on LS shoulder may indicate location of pipe, or it may indicate where pipe crosses approach ramp to bridge.

Photo 2 of 3 : UCIP\_SP\_2019\_53017\_75964.jpg



View from the levee crown looking toward the LS of the levee. gas line marker signs are visible marking an alignment parallel to the levee.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.28	Rating **	M	Issue No.	27 (cont)	
LM End	2.28	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.748505 °	38.748505 °	
				-121.692697 °	-121.692697 °	
DWR ID	19386					
Comment Code						
Inspector Comment						
FS_ID:53017 DS_ID:19386 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 09/16/2018 Crossing marker on levee Unit 02 is missing. Having a marker on County Road 16 shoulder is not enough to find exact crossing location on levee. Crossing has been downgraded to "Non-Urgent" due to reclassification of gas lines. (O.Yakimov - DWR)09/01/2016 - Markers present on the edges of Road 16. Alignment indicated by markers shows parallel alignment to the levee. Permit indicates pipe crosses levee and therefore should have markers indicating where it crosses the levee. (T. Hatch/UCIP)04/08/2013 - Need to have pipe located and marked properly if still in use. (W. Wylie/UCIP) FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee, 3.2 feet below the crown. Permit indicates that the pipe was installed on the northern shoulder of Road 16 and crosses the Knights Landing Ridge Cut on the northern side of the Road 16 bridge. (Permit No. 13164, 1981 - Shell Oil Company). FS Date: 10/16/2018 3:42:38 PM						

Photo 3 of 3 : UCIP\_SP\_2019\_53017\_75965.jpg



View of the marker signs information

LM Start	2.72	Rating **	A/W	Issue No.	8
LM End	2.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.754899 °	38.757925 °
				-121.692653 °	-121.693048 °
DWR ID	DWR_NA0008_02_f_2018_8				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.0 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Multiple scallops throughout the site and slumping of the toe.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	2.98	Rating **	M	Issue No.	9
LM End	3.11	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.758587 °	38.760053 °
				-121.693359 °	-121.694686 °
DWR ID	DWR_NA0008_02_f_2018_9				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.1 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Slumping of the levee toe.					

Photo 1 of 2 : SP\_2019\_NA0008\_257\_9\_20190304\_00003.jpg



View of the erosion on the waterside slope. Fall 2018.

LM Start	<b>2.98</b>	Rating **	M	Issue No.	<b>9 (cont)</b>
LM End	<b>3.11</b>	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : SP\_2019\_NA0008\_257\_9\_20190304\_00004.jpg



View of the opening within the center channel. Fall 2018.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.31	Rating **	A/W	Issue No.	14
LM End	3.31	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.762301 °	38.762301 °
				-121.697190 °	-121.697190 °
DWR ID	DWR_NA0008_02_f_2018_14				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
The primary channel changes course throughout the water year and erodes the slope through an opening in the center barrier. The slope appears to be stable and erosion is not within the prism. The levee is further reinforced by the newly constructed berm on the land side. Recommend monitoring.					

Photo 1 of 2 : SP\_2019\_NA0008\_257\_14\_20190304\_00005.jpg



View of erosion on the waterside slope. Fall 2018.

LM Start	<b>3.31</b>	Rating **	A/W	Issue No.	<b>14 (cont)</b>
LM End	<b>3.31</b>	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : SP\_2019\_NA0008\_257\_14\_20190304\_00006.jpg



View of the opening within the main channel, facing upstream. Fall 2018.

LM Start	3.60	Rating **	A/W	Issue No.	10
LM End	3.73	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.765522 °	38.767336 °
				-121.700608 °	-121.701023 °
DWR ID	DWR_NA0008_02_f_2018_10				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 3.7 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - The toe has eroded away and there are a few scallops from bank slumping.					

No Photos

* Location LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.93	Rating **	A/W	Issue No.	28
LM End	3.93	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.770317 °	38.770317 °
				-121.701281 °	-121.701281 °
DWR ID	19374				
Comment Code					
Inspector Comment					
FS_ID:11293 DS_ID:19374 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 01/14/2019 Pipe has been replaved with a 16-inch pipe under permit 9317-1; new DS-ID 25571. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 16-inch steel discharge pipe through the levee, 3 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS). Service pole at the pump house. (16-inch pipe [HLM 3.97] authorized under Automatic Board Order (ABO) issued as Permit No. 9317, 1974 - Reclamation District No. 819). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 211+05) (15-inch pipe listed)]. FS Date: 4/9/2013					

Photo 1 of 3 : UCIP\_SP\_2019\_11293\_18675.jpg



Pump on LS toe.

LM Start	<b>3.93</b>	Rating **	A/W	Issue No.	<b>28 (cont)</b>
LM End	<b>3.93</b>	Issue Type +	Ma	Location *	

Photo 2 of 3 : UCIP\_SP\_2019\_11293\_18674.jpg



Pump and pipes on LS toe.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.93	Rating **	A/W	Issue No.	28 (cont)
LM End	3.93	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.770317 °	38.770317 °
				-121.701281 °	-121.701281 °
DWR ID	19374				
Comment Code					
Inspector Comment					
FS_ID:11293 DS_ID:19374 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 01/14/2019 Pipe has been replaved with a 16-inch pipe under permit 9317-1; new DS-ID 25571. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: *REMOVED* 1 of 2: 16-inch steel discharge pipe through the levee, 3 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS). Service pole at the pump house. (16-inch pipe [HLM 3.97] authorized under Automatic Board Order (ABO) issued as Permit No. 9317, 1974 - Reclamation District No. 819). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 211+05) (15-inch pipe listed)]. FS Date: 4/9/2013					

Photo 3 of 3 : UCIP\_SP\_2019\_11293\_18673.jpg



16-inch pipe with siphon breaker on WS shoulder.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable  N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.94	Rating **	A/W	Issue No.	29
LM End	3.94	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.770335 °	38.770335 °
				-121.701286 °	-121.701286 °
DWR ID	19401				
Comment Code					
Inspector Comment					
FS_ID:11291 DS_ID:19401 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 01/14/2019 Pipe was removed replaced with a new 24-inch pipe through the levee. Permit 9317-1 issues authorization of emergency removal and replacement of the pipe in September 2012. New DS-ID 25572. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: *REMOVED* 2 of 2: 24-inch steel discharge pipe through the levee, 9 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS) with a butterfly shutoff valve. Service pole at the pump house. (Permit No. 9317, 1974 - Reclamation District No. 819). Pipe replaced in 2012. [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 210+99)]. FS Date: 4/9/2013					

LM Start	<b>3.94</b>	Rating **	A/W	Issue No.	<b>29 (cont)</b>
LM End	<b>3.94</b>	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP\_SP\_2019\_11291\_18669.jpg



Pumphouse at LS toe.

Photo 2 of 3 : UCIP\_SP\_2019\_11291\_18668.jpg



Pipe in grass on WS shoulder.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

## Levee Inspection Report By Mile - Spring 2019

### Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	3.94	Rating **	A/W	Issue No.	29 (cont)	
LM End	3.94	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.770335 °	38.770335 °	
				-121.701286 °	-121.701286 °	
DWR ID	19401					
Comment Code						
Inspector Comment						
FS_ID:11291 DS_ID:19401 EP_NO: 9317 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: 01/14/2019 Pipe was removed replaced with a new 24-inch pipe through the levee. Permit 9317-1 issues authorization of emergency removal and replacement of the pipe in September 2012. New DS-ID 25572. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: *REMOVED* 2 of 2: 24-inch steel discharge pipe through the levee, 9 feet below the crown. Pump house on pile structure in drainage ditch on the landside (LS). Siphon breaker on the pipe on the waterside (WS) with a butterfly shutoff valve. Service pole at the pump house. (Permit No. 9317, 1974 - Reclamation District No. 819). Pipe replaced in 2012. [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 210+99)]. FS Date: 4/9/2013						

Photo 3 of 3 : UCIP\_SP\_2019\_11291\_18667.jpg



Siphon breaker and butterfly valve on WS shoulder.

LM Start	4.30	Rating **	A/W	Issue No.	11
LM End	4.55	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.775271 °	38.778115 °
				-121.703685 °	-121.706195 °
DWR ID	DWR_NA0008_02_f_2018_11				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 4.7 L					
Status: Eroding					
2017 Field Notes: Access Issues - Could not observe					
Site History: 2011 - This site is the downstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	5.36	Rating **	A/W	Issue No.	12
LM End	5.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.786566 °	38.792395 °
				-121.716724 °	-121.724091 °
DWR ID	DWR_NA0008_02_f_2018_12				
Comment Code					
Inspector Comment					
2017 Site ID: KLR 5.8 L					
Status: Eroding					
2017 Field Notes: Hummocky levee, with multiple slump failures and tree popouts.					
Site History: 2011 - This site is the upstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement.					

No Photos

LM Start	5.55	Rating **	M	Issue No.	30
LM End	5.55	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.788662 °	38.788662 °
				-121.718997 °	-121.718997 °
DWR ID	19375				
Comment Code					
Inspector Comment					
FS_ID:11289					
DS_ID:19375					
EP_NO: 3671					
Repair Type: Non-Urgent					
Crossing Status: Found					
UCIP Comments: Electrical panal missing parts. Siphon breaker missing from pipe on LS. Pipe heavily corroded at outlet with holes present. Appears abandoned-should be abandoned properly.					
FIELD_STRUCT_DESC: 20-inch coated steel irrigation pipe through the levee, 5.5 feet below the crown. Siphon breaker in a steel pipe riser on the landside (LS) slope. Metal cutoff wall. Service pole on the waterside (WS) slope. (Replaced 20-inch pipe at same location in 1961 under Permit No. 3671, 1961 - Mary Anna Richardson). [Additional Reference(s): DWR Levee Log, 1990].					
FS Date: 4/9/2013					

Photo 1 of 3 : UCIP\_SP\_2019\_11289\_18665.jpg



Pump on pile structure on WS toe.

* Location LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	5.71	Rating **	C	Issue No.	13
LM End	5.71	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			38.790352 °	38.790352 °
				-121.721124 °	-121.721124 °
DWR ID	DWR_NA0008_02_f_2018_13				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					
There are rodent holes on the landside slope.					

No Photos

LM Start	5.78	Rating **	M	Issue No.	17
LM End	5.78	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			38.791059 °	38.791059 °
				-121.722060 °	-121.722060 °
DWR ID	DWR_NA0008_02_s_2019_17				
Comment Code					
S3 : Repair the levee slope damaged by vehicle traffic and prevent access where possible.					
Inspector Comment					
There are tire ruts on the waterside slope. LMA will extend pipe fence to prevent traffic from driving on the slope.					

Photo 1 of 1 : SP\_2019\_NA0008\_257\_17\_20190404\_00029.jpg



View of tire tracks on the waterside slope. Spring 2019.

LM Start	5.94	Rating **	M	Issue No.	1
LM End	5.94	Issue Type +	En	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.792735 °	38.792735 °
				-121.724092 °	-121.724092 °
DWR ID	DWR_NA0008_02_s_2012_1				
Comment Code					
FE : Fence					
Inspector Comment					
A fence blocks access to NW part of the levee. Strawberries are being grown on the waterside slope and beehives are on the crown.					

Photo 1 of 2 : SP\_2019\_NA0008\_257\_1\_20190304\_00001.jpg



View of the fence on the crown. Fall 2017.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Spring 2019**

**Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	04/04/2019 04/04/2019	Zach Jojola

LM Start	5.94	Rating **	M	Issue No.	1 (cont)	
LM End	5.94	Issue Type +	En	Location *	CR	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Encroachments			38.792735 °		38.792735 °
				-121.724092 °		-121.724092 °
DWR ID	DWR_NA0008_02_s_2012_1					
Comment Code						
FE : Fence						
Inspector Comment						
A fence blocks access to NW part of the levee. Strawberries are being grown on the waterside slope and beehives are on the crown.						

Photo 2 of 2 : SP\_2019\_NA0008\_257\_1\_20190304\_00002.jpg



View of the fence on the crown of the levee looking upstream. Spring 2016.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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